

इंटरनेट

मानक

### Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

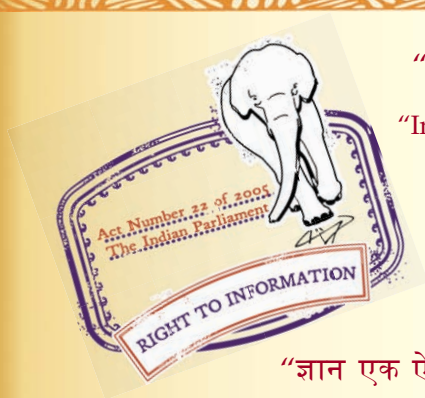
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 11250 (1985): Bow Saw Frames [PGD 6: Earth, Metal And Wood Working Hand Tools]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



BLANK PAGE





Indian Standard

## SPECIFICATION FOR BOW SAW FRAMES

**1. Scope** — Covers the requirements of bow saw frames suitable for blades conforming to IS : 11251-1985 'Specification for bow saw blades'.

**2. Types**

Type A — One man bow saw frame.

Type B — Two men bow saw frame.

**3. Nomenclature** — Shall be as given in Fig. 1.

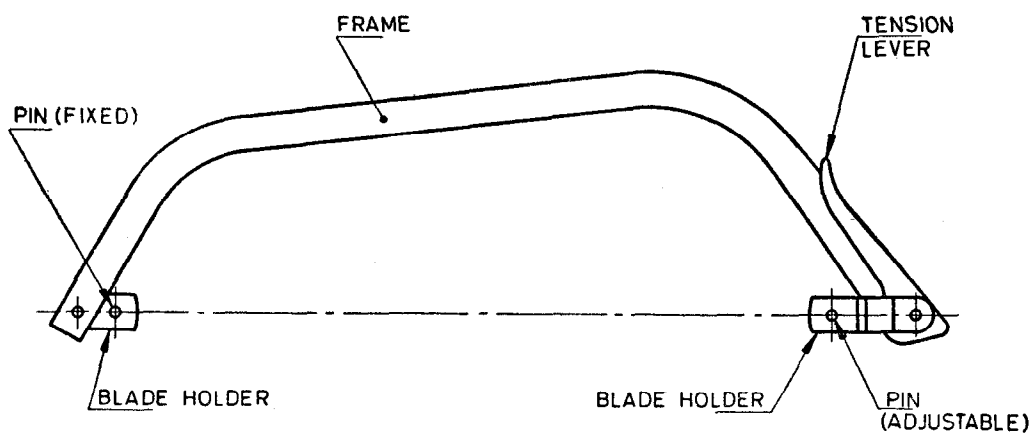
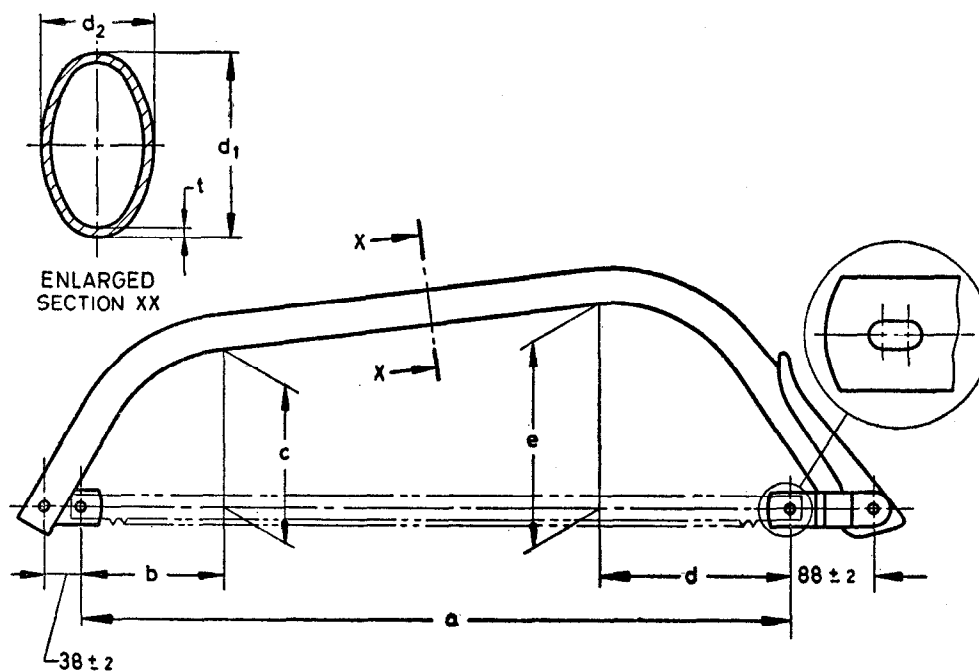


FIG. 1 NOMENCLATURE

**4. Dimensions**

**4.1 Type A — One man bow saw frame.**



Adopted 19 August 1985

© September 1985, ISI

Gr 2

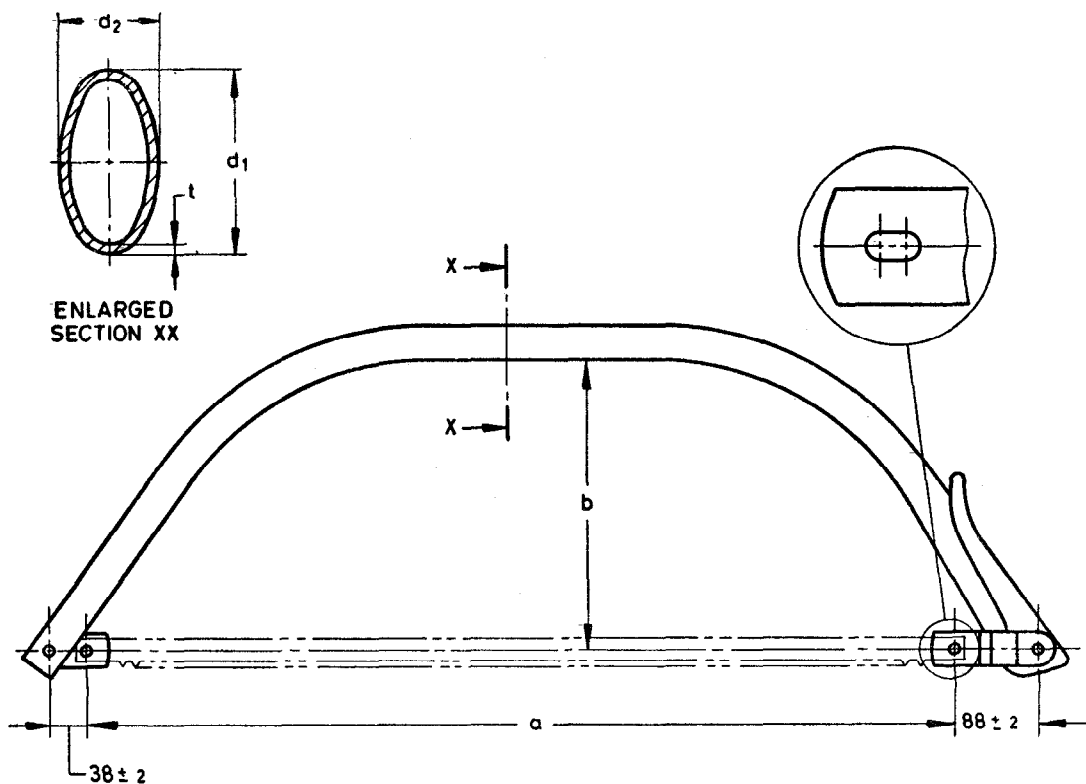
INDIAN STANDARDS INSTITUTION  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

All dimensions in millimetres.

Nominal Size	$a \pm 2$	$b$	$c$ <i>Min</i>	$d$	$e$ <i>Min</i>	Elliptical Tube		
						$d_1 \pm 1$	$d_2 \pm 1$	Thickness $t \pm 0.2$
760	744	150	165	200	215	36	19	16
915	901	150	165	200	215			

Note — Dimension 'a' shall be measured without keeping blade in the frame.

#### 4.2 Type B — Two men bow saw frame.



All dimensions in millimetres.

Nominal Size	$a \pm 2$	$b$ <i>Min</i>	Elliptical Tube		
			$d_1 \pm 1$	$d_2 \pm 1$	Thickness $t \pm 0.2$
915	903	300	36	19	1.6

Note — Dimension 'a' shall be measured without keeping blade in the frame.

5. **Mass** — The mass of the bow saw frames (*excluding the bow saw blade*) shall be as given below:

Type of Bow Saw Frame	Nominal Size	Max Mass kg
A	760	1.4
A	915	1.6
B	915	1.8

6. **Material** — The bow saw frames shall be manufactured from steel tubes, either electrical resistance butt welded or seamless, meeting the requirements laid down in 9.

*Suitable example:*

Steel designation 5C<sub>4</sub> conforming to IS : 1570 (Part 2)-1979 Schedules for wrought steels: Part 2 Carbon steel (unalloyed steel) (*first revision*).

7. **Designation** — Bow saw frames shall be designated by nominal size of bow saw, type and number of this Indian Standard.

*Example:*

Bow saw frame of nominal size 915 mm, and Type B (*Two men bow saw frame*) shall be designated as:

Bow Saw Frame 915 B IS : 11250

## 8. Manufacture, Workmanship and Finish

8.1 The bow saw frames shall be manufactured from elliptical cross-section tubes, to steer the blade easily during sawing. The bow bend may be lightly crimped for rigidity. To avoid twisting of the blades, the holders shall be straight. The holes for the pins in the blade holders, shall have shape, so that the pin can easily be loosened enough to let the blade free when the tension lever is opened. The blade holder shall be easily turnable. One pin shall be riveted on the blade holder, whereas other may be kept loose. The pin shall be of such a shape that it is not lost, when the blade is not in the frame.

8.1.1 The lever shall be designed to facilitate easy as well as comfortable gripping and pulling by hand when tensioning and detensioning operations are carried out.

8.1.2 To enable the user to hold the saw frames easily and positively, the frame may be provided with a hand grip and/or guard.

8.2 All components of the bow saw frame shall be free from burrs, scales, flashes, fins and other deleterious defects.

8.3 The frame shall be suitably painted to avoid rust.

9. **Tension Load Test** — A suitable fixture for the application of the load may be used. While applying load, the condition shall be the same as if the blade is in tension. For bow saw frames of all sizes tension of 2 500N shall be applied. Both the ends shall be simultaneously loaded for a minimum period of one minute (*see Fig. 2*). The loading shall be gradual and without any jerks.

After removing the load, there shall not be any cracks or failure of components. It shall also be checked for permanent set. The permanent set shall not vary more than 1.5 mm.

## 10. Storing and Packing

10.1 The frame shall be stored and packed without blades fitted to avoid permanent set in the frame.

10.2 The frames shall be packed separately as per the best trade practices prevalent in the country.

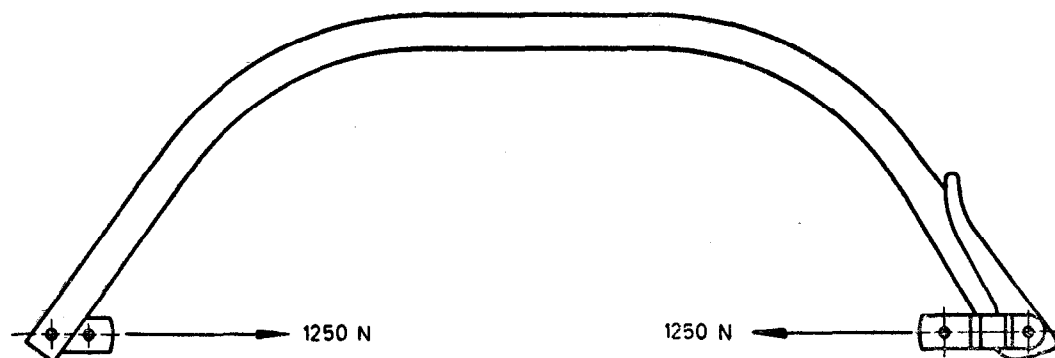


FIG. 2 TENSION LOAD TEST

**11. Marking** — The frames shall be marked with manufacturer's name, initials and/or registered trade-mark, nominal size, type and year of manufacture.

**11.1 ISI Certification Marking** — Details available with the Indian Standards Institution.

## 12. Sampling

**12.1** Unless otherwise agreed to between the manufacturer and the purchaser the sampling plan and criteria for conformity shall be as per IS : 2500 ( Part 1 )-1973. 'Sampling inspection, tables: Part 1 Inspection by attributes and by count of defects ( *first revision* )'.

**12.2** For dimensions as well as workmanship and finish a sampling plan with inspection level III and AQL of 4 percent as given in Tables 1 and 2 of IS : 2500 ( Part 1 )-1973 shall be followed.

**12.3** For tension load test a sampling plan with inspection level I and AQL 1.5 percent as given in Table 1 of IS : 2500 ( Part 1 )-1973 shall be followed. If any frame fails to meet the requirement of this characteristics, the lot shall be declared defective.

## EXPLANATORY NOTE

The bow saw frames fitted with bow saw blades are used for felling of smaller dimension stems or the branches of the trees, generally in the forests.

For tension load test given in 9, it depends on the manufacturers to use any suitable test fixture to apply the specified load of 2 500N. However by experience it has been ascertained that the specified load is also achieved by compressing the frame in order to get the following compression ( *i.e. change in distance between two pins* ):

Type A Nominal Size 760	12 mm <i>Max</i>
Type A Nominal Size 915	16 mm <i>Max</i>
Type B Nominal Size 915	18 mm <i>Max</i>

These values are recommendatory and for guidance only.

In the preparation of this specification, considerable assistance has been taken from the details supplied by Logging Development Institute, Dehra Dun and from the following documents :

SMS 1444-1949 Bow saw frames issued by Sevensk Standard Sweden.

NCB 393-1982 Specification for bow saws and blades issued by National Coal Board (UK).